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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,518	08/18/2003	Rinze Benedictus	APV31645	1585
77213 7590 03/24/2008 Novak Druce + Quigg, LLP 1300 Eye Street, NW, Suite 1000 Suite 1000, West Tower Washington, DC 20005				
EXAMINER ROE, JESSEE RANDALL				
ART UNIT		PAPER NUMBER		
1793				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/642,518

**Applicant(s)**

BENEDICTUS ET AL.

**Examiner**

Jessee Roe

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 23-34, 38-50, 52-54, 56 and 57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-34, 38-50, 52-54 and 56-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Status of the Claims***

Claims 23-34, 38-50, 52-54 and 56-57 are pending wherein claims 1-22, 35-37, 51 and 55 are canceled and claims 56-57 are new.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 23-24, 26-30, 32-34, 38-50, 52-54 and 56-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cassada III (US 5,593,516).

Claims 23-24, 26-30, 32-34, 38-50, and 52-54 are rejected on the same grounds as set forth in the Office Action of 16 July 2007.

In regards to claims 56, Cassada III ('516) discloses an aluminum based alloy having 2.5 to 5.5 weight percent copper; 0.10 to 2.3 weight percent magnesium; up to 0.80 weight percent manganese (which would include 0 weight percent); up to about 0.30 weight percent iron; and up to about 0.25 weight percent silicon, which overlaps the ranges of 4.3 to 4.5 weight percent copper; 0 weight percent manganese; 1.6 to 1.7 weight percent magnesium; 0.06 to 0.10 weight percent iron; and 0.23 to 0.30 weight percent silicon, as claimed in the instant invention.

In regards to claim 57, Cassada III ('516) discloses an aluminum based alloy having 2.5 to 5.5 weight percent copper; 0.10 to 2.3 weight percent magnesium; up to 0.80 weight percent manganese (which would include 0 weight percent); up to about 0.30 weight percent iron; and up to about 0.25 weight percent silicon, which overlaps the ranges of 4.3 to 4.5 weight percent copper; 0 weight percent manganese; 1.6 to 1.7 weight percent magnesium; 0.06 to 0.10 weight percent iron; and 0.10 to 0.25 weight percent silicon, as claimed in the instant invention.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cassada III (US 5,593,516), and further in view of Rioja et al. (US 6,562,154 B1).

Claim 25 is rejected on the same grounds as set forth in the Office Action of 16 July 2007.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cassada III (US 5,593,516), and further in view of "Metals Handbook Desk Edition) pp. 445-446.

Claim 31 is rejected on the same grounds as set forth in the Office Action of 16 July 2007.

### ***Response to Declaration***

The declaration under 37 CFR 1.132 filed 16 January 2008 is insufficient to overcome the rejection of claims 23-24, 26-30, 32-34, 38-50 and 52-54 based upon Cassada III ('516) as set forth in the last Office action.

First, the Applicant primarily argues that "Cassada III ('516) teaches away from the presently claimed combination of copper and magnesium levels. Its Abstract

discloses the alloy consists essentially of 2.5-5.5 percent copper, 0.10-2.30 percent magnesium, with minor amounts of refining elements, dispersoid additions and impurities and the balance aluminum. However, the Abstract also immediately thereafter states, 'The amounts of copper and magnesium are controlled such that the solid solubility limit for these elements is not exceeded.'". In response to this argument, the Examiner notes that Cassada III ('516) teaches that that the control of the copper and magnesium would be in order to avoid any excess solute that would contribute to the second phase content and diminish fracture toughness (cols. 3-4) and "*In one aspect of the invention*, the aluminum-based has the major solute elements of copper and magnesium controlled such that the solubility limit is not exceeded" (col. 3, lines 51-54). Therefore, it would be expected that Cassada III ('516) would not be limited to the processing of compositions within the solubility limits and would allow for the processing of compositions outside of the solubility limits. Disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. MPEP 2123 II.

Second, the Applicant primarily argues that because Cassada III ('516) indicates that Sample 6 would have a low toughness, one skilled in the art would not follow the teachings of Sample 6. To establish unexpected results over a claimed range, applicants should compare a sufficient number of tests both inside and outside the claimed range to show the criticality of the claimed range. MPEP 716.02(d)(II). Because the Applicant has not shown the criticality of the ranges with respect to the acquired

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toughness, strength or any other recited properties, the claims would not distinguish from the alloys acquired from the processing disclosed by Cassada III ('516).

### ***Response to Arguments***

Applicant's arguments filed 16 January 2008 have been fully considered but they are not persuasive.

First, the Applicant primarily argues that Cassada III ('516) teaches away from the presently claimed combination of copper and magnesium levels. The Applicant further argues that the invention disclosed and claimed in Cassada III ('516) is directed to the control of the level of copper and magnesium in the aluminum alloy below the solubility limit for these elements in aluminum. In response to these arguments, the Examiner notes that this would be only one of the aspects in the invention disclosed by Cassada III ('516) and the invention would not be limited to this aspect. MPEP 2123 II. *"In one aspect of the invention, the aluminum-based has the major solute elements of copper and magnesium controlled such that the solubility limit is not exceeded"* (col. 3, lines 51-54).

Second, the Applicant primarily argues that no prima facie case of obviousness has been established because Cassada III ('516) teaches away from the presently recited copper and magnesium ranges. In response to this argument, the Examiner notes that Cassada III ('516) teaches that that the control of the copper and magnesium would be in order to avoid any excess solute that would contribute to the second phase content and diminish fracture toughness (cols. 3-4) and *"In one aspect of the invention,*

the aluminum-based has the major solute elements of copper and magnesium controlled such that the solubility limit is not exceeded" (col. 3, lines 51-54). Therefore, it would be expected that Cassada III ('516) would not be limited to the processing of compositions within the solubility limits and would allow for the processing of compositions outside of the solubility limits. Disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. MPEP 2123 II.

Third, the Applicant primarily argues that the instant invention achieves unexpected improved results over AA2x24 alloys and the applicant's invention provides a demonstrated improvement over AA2x24 alloys. In response to this argument, to establish unexpected results over a claimed range, applicants should compare a sufficient number of tests both inside and outside the claimed range to show the criticality of the claimed range. MPEP 716.02(d)(II). Because the Applicant has not shown the criticality of the ranges with respect to the acquired toughness, strength or any other properties recited in the claims, the claims would not distinguish from the alloys acquired from the processing disclosed by Cassada III ('516).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jesse Roe whose telephone number is (571) 272-5938. The examiner can normally be reached on Monday-Friday 7:30 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JR

/John P. Sheehan/  
Primary Examiner, Art Unit 1793

**Application Number****Application/Control No.**

10/642,518

**Examiner**

Jessee Roe

**Applicant(s)/Patent under  
Reexamination**

BENEDICTUS ET AL.

**Art Unit**

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